AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of reducing gastrointestinal motility in a subject suffering from an abnormal increase in gastrointestinal motility, said method comprising administering to said subject a gastrointestinal motility reducing amount of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, wherein the N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof is administered in the form of a modified-release formulation, the modified-release formulation produces a peak:trough plasma level ratio of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine of less than about 4:1.

2. (Currently Amended) The method according to claim 1, wherein said abnormal increase in gastrointestinal motility is caused by at least one condition chosen from inflammatory bowel disease, ulcerative colitis, granulomatous enteritis, infectious diseases of the small or large intestine, pyloric spasm, abdominal cramps, a functional bowel disorder, mild dysenteries, diverticulitis, acute enterocolitis, neurogenic bowel disorders, splenic flexure syndrome, neurogenic colon, and spastic colitis, or is a symptom of any of the foregoing conditions.

3. (Original) The method according claim 2, wherein the condition is a functional bowel disorder.

4. (Original) The method according to claim 3, wherein the condition is irritable bowel syndrome.

5. (Original) The method according to claim 1, wherein said abnormal increase in gastrointestinal motility is reduced, while minimizing at least one side effect associated with the administration of a conventional formulation of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

6. (Original) The method according to claim 5, wherein said at least one effect is chosen from effects on said subject's heart rate, blood pressure, vision, and bladder function.

7. (Canceled)

8. (Canceled)

9. (Currently Amended) The method according to claim ~~7~~ 1, wherein said pharmaceutically acceptable formulation is suitable for oral, intra-nasal, or transdermal administration.

10. (Original) The method according to claim 9 wherein said pharmaceutically acceptable formulation is suitable for buccal or sublingual administration.

11. (Currently Amended) The method according to claim ~~8~~ 1, wherein said pharmaceutically acceptable formulation is suitable for oral, intra-nasal, or transdermal administration.

12. (Original) The method according to claim 11 wherein said pharmaceutically acceptable formulation is suitable for buccal or sublingual administration.

13. (Currently Amended) The method according to claim ~~7~~ 1, wherein said pharmaceutically acceptable formulation comprises a modified-release formulation in combination with an immediate-release formulation.

14. (Original) The method according to claim 13, wherein said pharmaceutically acceptable formulation is suitable for oral, intra-nasal, or transdermal administration.

15. (Original) The method according to claim 14, wherein said pharmaceutically acceptable formulation is suitable for buccal or sublingual administration.

16. (Original) The method according to claim 1, wherein said gastrointestinal motility reducing amount of N,-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine or a pharmaceutically acceptable salt thereof is about 0.2 mg to about 40 mg.

17. (Original) The method according to claim 16, wherein said gastrointestinal motility reducing amount is about 0.5 mg to about 20 mg.

18. (Original) The method according to claim 17, wherein said gastrointestinal motility reducing amount is about 1 mg to about 15 mg.

19. (Original) The method according to claim 18, wherein said gastrointestinal motility reducing amount is about 2 mg to about 12 mg.

20. (Original) The method according to claim 1, wherein said administration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, provides a maximum plasma concentration of

N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine at about 3.5 hours, or later, following a first administration.

21. (Original) The method according to claim 20, wherein said maximum plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine is achieved at about 6 hours, or later, following a first administration.

22. (Original) The method according to claim 1, wherein said N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, is administered once-daily.

23. (Original) The method according to claim 1, wherein said N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine comprises racemic N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, enriched (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, enriched (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, substantially pure (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, substantially pure (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or pharmaceutically acceptable salts thereof.

24. (Original) The method according to claim 23, wherein said N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine comprises racemic N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

25. (Original) The method according to claim 23, wherein said N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine comprises enriched N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

26. (Original) The method according to claim 23, wherein said N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine comprises substantially pure N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

27. (Original) The method according to claim 1, wherein said N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, is administered in combination with at least one other pharmaceutically active compound.

28. (Original) The method according to claim 27, wherein said at least one other pharmaceutically active compound is chosen from ganglionic blockers, nicotinic-receptor antagonists, gastrointestinal motility altering agents, antispasmodics, antimuscarinic agents, opiates, 5-HT receptor agonists, 5-HT receptor antagonists, calcium channel blockers, beta adrenergic receptor blockers, agents that alter fluid transport across the gut, agents that alter fluid transport into or out of gastrointestinal cells, diuretics, anti-diarrheals, H_2-antihistamines, proton pump inhibitors, antacids, anti-inflammatory agents, steroids, mineralocorticoids, corticosteroids, anti-infective agents, immunomodulators, and fish oil.

29. (Original) The method according to claim 28, wherein said at least one other pharmaceutically active compound is chosen from hexamethonium, trimethaphan, chloroisondamine, erysodine, β-dihydroerythrodine, amantidine, perpidine, succinylcholine, decamethonium, tubocurarine, atracurium, doxacurium, mivicurium, pancuronium, rocuronium, vencuronium, glycopyrrolate, atropine, hyscomine, scopolamine, loperamide, difenoxine, codeine, morphine, oxymorphone, oxycontin, dihydrocodeine, fentanyl, alosetron hydrochloride, verapamil, amiloride, furosemide,

bismuth, sandostatin, sulfasalazine, estrogens, prednisone, prednisolone, cortisol, cortisone, fluticasone, dexamethasone, betamethasone, 5-aminosalicylic acid, metronidazole, ciprofloxacin, azathioprine, 6-mercaptopurine, cyclosporine, methotrexate, fish oil, remicade, heparin, and nicotine.

30. (Currently Amended) A pharmaceutically acceptable formulation comprising N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, in the form of a modified-release formulation for oral, intra-nasal, or transdermal administration, wherein administration of the modified release formulation to a subject reduces gastrointestinal motility and minimizes at least one side effect associated with the administration of a conventional formulation of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, and wherein the modified-release formulation produces a peak:trough plasma level ration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine of less than about 4:1.

31. (Original) The pharmaceutically acceptable formulation according to claim 30, wherein the modified-release formulation is for buccal or sublingual administration.

32. (Original) The pharmaceutically acceptable formulation according to claim 30, wherein the formulation comprises N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amino or a pharmaceutically acceptable salt thereof in an amount ranging from about 0.2 mg to about 40 mg.

33. (Original) The pharmaceutically acceptable formulation according to claim 32, wherein the formulation comprises N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-

amino or a pharmaceutically acceptable salt thereof in an amount ranging from about 0.5 mg to about 20 mg.

34. (Original) The pharmaceutically acceptable formulation according to claim 33, wherein the formulation comprises N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amino or a pharmaceutically acceptable salt thereof in an amount ranging from about 1 mg to about 15 mg.

35. (Original) The pharmaceutically acceptable formulation according to claim 34, wherein the formulation comprises N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amino or a pharmaceutically acceptable salt thereof in an amount ranging from about 2 mg to about 12 mg.

36. (Original) The pharmaceutically acceptable formulation according to claim 30, comprising extended-release components, or delayed-release components, or both extended-release and delayed-release components.

37. (Original) The pharmaceutically acceptable formulation according to claim 30, further comprising at least one immediate-release component.

38. (Canceled)

39. (Currently Amended) The pharmaceutically acceptable formulation according to claim ~~38~~ 30, wherein said at least one effect is chosen from effects on said subject's heart rate, blood pressure, vision, and bladder function.

40. (Currently Amended) The pharmaceutically acceptable formulation according to claim 30, wherein ~~a first administration of said~~ the formulation provides a

maximum plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine at about 3.5 hours, or later, following ~~said~~ administration.

41. (Currently Amended) The pharmaceutically acceptable formulation according to claim 40, wherein ~~said~~ the maximum plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine is achieved at about 6 hours, or later, following ~~said~~ administration.

42. (Currently Amended) The pharmaceutically acceptable formulation according to claim 30, wherein said formulation is ~~therapeutically effective when~~ administered once per day.

43. (Canceled)

44. (Currently Amended) The pharmaceutically acceptable formulation according to claim 30 ~~43~~, wherein said peak:trough plasma level ratio is less than about 3:1.

45. (Original) The pharmaceutically acceptable formulation according to claim 44, wherein said peak:trough plasma level ratio is less than about 2:1.

46. (Original) The pharmaceutically acceptable formulation according to claim 30, wherein administration of said formulation provides a plasma concentration of N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine, at least about 24 hours following a first administration, that is greater than or equal to about 25% of the peak plasma concentration achieved following said administration.

47. (Original) The pharmaceutically acceptable formulation according to claim 46, wherein said plasma concentration of N-2,3,3-tetramethylbicyclo[2.2.1]heptan-

2-amine, at least about 24 hours following a first administration, is greater than or equal to about 50% of the peak plasma concentration achieved following said administration.

48. (Original) The pharmaceutically acceptable formulation according to claim 30, wherein administration of said formulation provides a plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine that is greater than or equal to about 50% of the peak plasma concentration, for greater than or equal to about 14 hours, following a first administration.

49. (Original) The pharmaceutically acceptable formulation according to claim 48, wherein said plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine is greater than or equal to about 50% of the peak plasma concentration, for greater than or equal to about 16 hours, following a first administration.

50. (Original) The pharmaceutically acceptable formulation according to claim 49, wherein said plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine is greater than or equal to about 50% of the peak plasma concentration, for greater than or equal to about 18 hours, following a first administration.

51. (Original) The pharmaceutically acceptable formulation according to claim 50, wherein said plasma concentration of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine is greater than or equal to about 50% of the peak plasma concentration, for greater than or equal to about 24 hours, following a first administration.

52. (Original) The pharmaceutically acceptable formulation according to claim 30, wherein the formulation, when tested in a U.S. Pharmacopeia (USP) Type 2 Apparatus, at 37°C, stirred at 50 rpm, and in pH 6.8 phosphate buffer, releases less than about 50% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine in less than about 2 hours, greater than or equal to about 40% in about 12 or more hours, and about 70% or more in about 24 or more hours.

53. (Original) The pharmaceutically acceptable formulation according to claim 52, wherein less than or equal to about 50% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in about 2 hours, less than or equal to about 70% is released in about 4 hours, greater than or equal to about 50% is released in about 8 hours, greater than or equal to about 65% is released in about 12 hours, and greater than or equal to about 80% is released in about 24 hours.

54. (Original) The pharmaceutically acceptable formulation according to claim 53, wherein less than or equal to about 40% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in about 2 hours, less than or equal to about 65% is released in about 4 hours, greater than or equal to about 60% is released in about 8 hours, greater than or equal to about 70% is released in about 12 hours, and greater than or equal to about 80% is released in about 24 hours.

55. (Original) The pharmaceutically acceptable formulation according to claim 54, wherein less than or equal to about 30% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in about 2 hours, about 20% to about 60% is released in about 4 hours, greater than or equal to about 70% is released

in about 8 hours, greater than or equal to about 75% is released in about 12 hours, and greater than or equal to about 80% is released in about 24 hours.

56. (Original) The pharmaceutically acceptable formulation according to claim 30, comprising racemic N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, enriched (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, enriched (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, substantially pure (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, substantially pure (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or pharmaceutically acceptable salts thereof.

57. (Original) The pharmaceutically acceptable formulation according to claim 56, comprising racemic N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

58. (Original) The pharmaceutically acceptable formulation according to claim 56 comprising enriched (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

59. (Original) The pharmaceutically acceptable formulation according to claim 56 comprising substantially pure (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

60. (Original) The pharmaceutically acceptable formulation according to claim 56 comprising enriched (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

61. (Original) The pharmaceutically acceptable formulation according to claim 56 comprising substantially pure (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

62. (Original) The pharmaceutically acceptable formulation according to claim 30, further comprising at least one other pharmaceutically active compound.

63. (Original) The pharmaceutically acceptable formulation according to claim 62, wherein said at least one other pharmaceutically active compound is chosen from ganglionic blockers, nicotinic-receptor antagonists, gastrointestinal motility altering agents, antispasmodics, antimuscarinic agents, opiates, 5-HT receptor agonists, 5-HT receptor antagonists, calcium channel blockers, beta adrenergic receptor blockers, agents that alter fluid transport across the gut, agents that alter fluid transport into or out of gastrointestinal cells, diuretics, anti-diarrheals, H_2-antihistamines, proton pump inhibitors, antacids, anti-inflammatory agents, steroids, mineralocorticoids, corticosteroids, anti-infective agents, immunomodulators, and fish oil.

64. (Original) The pharmaceutically acceptable formulation according to claim 63, wherein said at least one other pharmaceutically active compound is chosen from hexamethonium, trimethaphan, chloroisondamine, erysodine, β-dihydroerythrodine, amantidine, perpidine, succinylcholine, decamethonium, tubocurarine, atracurium, doxacurium, mivicurium, pancuronium, rocuronium, vencuronium, glycopyrrolate, atropine, hyscomine, scopolamine, loperamide, difenoxine, codeine, morphine, oxymorphone, oxycontin, dihydrocodeine, fentanyl, alosetron hydrochloride, verapamil, amiloride, furosemide, bismuth, sandostatin, sulfasalazine, estrogens, prednisone, prednisolone, cortisol, cortisone, fluticasone,

dexamethasone, betamethasone, 5-aminosalicylic acid, metronidazole, ciprofloxacin, azathioprine, 6-mercaptopurine, cyclosporine, methotrexate, fish oil, remicade, heparin, and nicotine.

65. (Currently Amended) A pharmaceutically acceptable transdermal formulation, comprising N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof, that when tested using modified Franz diffusion cells of human epidermis, in phosphate buffer at a pH of about 4 to about 7, at about 32°C, exhibits a permeation rate in which less than about 50% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in less than about 2 hours, greater than or equal to about 40% is released in about 12 or more hours, and about 70% or more is released in about 24 or more hours, and produces a peak:trough plasma level ratio of N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine of less than about 4:1.

66. (Original) The pharmaceutically acceptable transdermal formulation according to claim 65, wherein less than or equal to about 40% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in about 2 hours, about 10% to about 70% is released in about 4 hours, about 20% to about 80% is released in about 8 hours, greater than or equal to about 40% is released in about 12 hours, and greater than or equal to about 70% is released in about 24 hours.

67. (Original) The pharmaceutically acceptable transdermal formulation according to claim 66, wherein less than or equal to about 30% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in about 2 hours, about 15% to about 60% is released in about 4 hours, about 30% to about 70% is released in about 8

hours, greater than or equal to about 50% is released in about 12 hours, and greater than or equal to about 75% is released in about 24 hours.

68. (Original) The pharmaceutically acceptable transdermal formulation according to claim 67, wherein less than or equal to about 25% of said N-2,3,3-tetramethylbicyclo[2.2.1]heptan-2-amine is released in about 2 hours, about 20% to about 50% is released in about 4 hours, about 40% to about 70% is released in about 8 hours, greater than or equal to about 55% is released in about 12 hours, and greater than or equal to about 80% is released in about 24 hours.

69. (Original) The pharmaceutically acceptable transdermal formulation according to claim 68, further comprising at least one other pharmaceutically active compound.

70. (Original) The pharmaceutically acceptable transdermal formulation according to claim 69, wherein said at least one other pharmaceutically active compound is chosen from ganglionic blockers, nicotinic-receptor antagonists, gastrointestinal motility altering agents, antispasmodics, antimuscarinic agents, opiates, 5-HT receptor agonists, 5-HT receptor antagonists, calcium channel blockers, beta adrenergic receptor blockers, agents that alter fluid transport across the gut, agents that alter fluid transport into or out of gastrointestinal cells, diuretics, anti-diarrheals, H_2-antihistamines, proton pump inhibitors, antacids, anti-inflammatory agents, steroids, mineralocorticoids, corticosteroids, anti-infective agents, immunomodulators, and fish oil.

71. (Original) The pharmaceutically acceptable transdermal formulation according to claim 70, wherein said at least one other pharmaceutically active compound is chosen from hexamethonium, trimethaphan, chloroisondamine, erysodine, β-dihydroerythrodine, amantidine, perpidine, succinylcholine, decamethonium, tubocurarine, atracurium, doxacurium, mivicurium, pancuronium, rocuronium, vencuronium, glycopyrrolate, atropine, hyscomine, scopolamine, loperamide, difenoxine, codeine, morphine, oxymorphone, oxycontin, dihydrocodeine, fentanyl, alosetron hydrochloride, verapamil, amiloride, furosemide, bismuth, sandostatin, sulfasalazine, estrogens, prednisone, prednisolone, cortisol, cortisone, fluticasone, dexamethasone, betamethasone, 5-aminosalicylic acid, metronidazole, ciprofloxacin, azathioprine, 6-mercaptopurine, cyclosporine, methotrexate, fish oil, remicade, heparin, and nicotine.

72. (Original) The pharmaceutically acceptable transdermal formulation according to claim 65, comprising racemic N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, enriched (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, enriched (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, substantially pure (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or substantially pure (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or pharmaceutically acceptable salts thereof.

73. (Original) The pharmaceutically acceptable transdermal formulation according to claim 72, comprising racemic N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

74. (Original) The pharmaceutically acceptable formulation according to claim 72 comprising enriched (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

75. (Original) The pharmaceutically acceptable formulation according to claim 72 comprising substantially pure (R)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

76. (Original) The pharmaceutically acceptable formulation according to claim 72 comprising enriched (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.

77. (Original) The pharmaceutically acceptable formulation according to claim 72 comprising substantially pure (S)-N-2,2,3-tetramethylbicyclo-[2.1.1]heptan-2-amine, or a pharmaceutically acceptable salt thereof.